

# BAOZHOU SUN

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## EDUCATION

**Ph.D. Candidate** in Dynamics of Defects in Semiconductors, the College of William and Mary.  
08/ 2002–Present

**M.S.** in Applied Science, the College of William and Mary. Williamsburg, VA. 08/00-08/02

**B.S.** in Semiconductor Materials & Devices, Department of Electronic Engineering. Jilin University, Jilin, China 09/96–07/00

## SKILLS

**Lasers:**

- Solid state laser applications, including Ti: sapphire oscillator, amplifier and OPA systems.
- Familiarity of operations of Tsunami/Spitfire/OPA system produced by Spectral physics and Mira/Tian/TOPAS system produced by Quantronix.
- I can develop some nonlinear Optical techniques, such as pump-probe, photon echo, and FWM.

**Electronics:** Familiarity of designing some simple circuits.

**Software:** Proficiency in Excel, Maple, Matlab, Labview, Origin, PowerPoint, Latex, Windows NT/2K/Me/98, and Linux, C programming language.

**Language:** Fluent in reading and writing Mandarin Chinese and English.

## RESEARCH EXPERIENCE

**Optics & Laser Group at the College of William and Mary**

**08/00 – present**

*Research Assistant (advisor Prof. Gunter Luepke)*

**Williamsburg VA**

- Experimental studies of lifetimes of hydrogen and oxygen defects in Si
- Structure dependence of lifetime of interstitial and vacancy type hydrogen defect
- Band offset measurements of magnet-semiconductors
- Development of photon echo experiments
- Fano resonance of hydrogen defect in doped Si.

**Department of Electronic Engineering at Jilin University,**

**08/99 –06/00**

*Research Assistant (advisor Prof. Fabin Qiu)*

**Changchun, China**

- Growth of a-Si by PECVD.
- Characterization of a-Si thin film transistors by XRD.

## TEACHING EXPERIENCE

**Physics Department at the College of William and Mary**

**09/02-12/02**

*Teaching Assistant*

**Williamsburg VA**

- Assist undergraduate physics major students to solve problems in Dr. Denis Manos' physics course.
- Develop leadership skills and strategies in helping students to develop problem solving ability.
- Provide necessary knowledge of physics to assist students and ensure a beneficial learning environment

## Publications

- **B. Sun**, Q. Yang, R. C. Newman, B. Pajot, N. H. Tolk, L. C. Feldman, and G. Lüpke **Vibrational Lifetimes and Isotope Effects of Interstitial Oxygen in Silicon and Germanium**, *Phys. Rev. Lett.* 92, 185503 (2004).
- **B. Sun**, A. Fraser, G. Lüpke, N. H. Tolk, and L. C. Feldman, **Vibrational Lifetimes of Hydrogen in Silicon**, AIP Conference Proceedings Volume 671, pp. 67-76(2003)
- G. Lüpke, X. Zhang, **B. Sun**, A. Fraser, N. H. Tolk, and L. C. Feldman, **Structure-Dependence of Vibrational Lifetimes of Hydrogen in Silicon**, *Phys. Rev. Lett.* 88, 135501 (2002).
- Zhao HB, Ren YH, **B. Sun**, Lüpke G, Hanbicki AT, Jonker BT. **Band offsets at CdCr<sub>2</sub>Se<sub>4</sub>-(AlGa)As and CdCr<sub>2</sub>Se<sub>4</sub>-ZnSe interfaces**. *Applied Physics Letters*, vol.82, no.9, pp.1422-4(2003).

## Contributed Talk

- “**Vibrational Lifetimes and Isotope Effects of Interstitial Oxygen in Silicon and Germanium**”, Baozhou Sun, Q. Yang, R. C. Newman, B. Pajot, N. H. Tolk, L. C. Feldman, and G. Lüpke, Montreal Canada, Mar 21-26, 2004, APS annual conference.
- “**Vibrational Lifetime of Interstitial Oxygen in Crystalline Si**”, Baozhou Sun, Andrew Fraser, Gunter Luepke, Austin, TX, Mar 2-7, 2003, APS annual conference.
- “**Vibrational Lifetime of Hydrogen defects in Si**” Baozhou Sun, Gunter Luepke, N. Tolk, L. C. Feldman. Jefferson Lab, Nov.11-13, Hydrogen workshop (Invited).

## Membership

- American Physical Society (APS)
- Webmaster of Chinese Scholar and Student Association at William and Mary (CSSA)

## Additional Information:

### Honors/Award:

- Received Outstanding Student Fellowship Award (1999)
- Received First Rank Scholarship Award for three consecutive years (1997-1999)
- Received Second Rank Scholarship Award (2000)
- Received Dongrong Scholarship Award (1999)
- Received Excellent Student Scholarship Award for three consecutive years(1997-1999)
- Received Honor in Undergraduate Thesis (2000)

**References are available upon request.**